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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

KOSACK, JOSEPH R

ART UNIT	PAPER NUMBER
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1626

MAIL DATE	DELIVERY MODE
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06/06/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/523,276	Applicant(s) GIRIBONE ET AL.	
	Examiner Joseph Kosack	Art Unit 1626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

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DETAILED ACTION

Claims 1-7 are pending in the instant application.

Priority

The claim to priority as a 371 filing of PCT/EP03/50340 filed July 28, 2003 is acknowledged in the instant application.

Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Europe on August 01, 2002. It is noted, however, that applicant has not filed a certified copy of the European application as required by 35 U.S.C. 119(b).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 7 provides for the use of compounds of Formula I, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 7 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition

of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 102

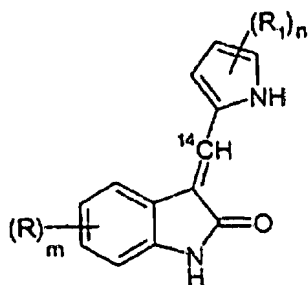
The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4 rejected under 35 U.S.C. 102(b) as anticipated by Tang et al. (USPN 5,834,504).

The instant application is drawn to compounds of formula I:



with substitutions as defined as well as a method of making by reacting an optionally substituted pyrrolinecarboxaldehyde with an oxindole in basic conditions. Included is the species 3-[(3,5-dimethyl-1H-pyrrol-2-yl)[^{14}C]methylene-1,3-dihydro-2H-indol-2-one.

Tang et al. teach the compound 3-[(3,5-dimethyl-1H-pyrrol-2-yl)methylene-1,3-dihydro-2H-indol-2-one along with the method of making by reacting the oxindole with optionally substituted pyrrolinecarboxaldehyde in piperidine. This reads on the claims

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because ^{14}C is within the natural abundance of carbon atoms and therefore the compound is inherently present in Tang et al.'s synthesis. See column 22, lines 42-49.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

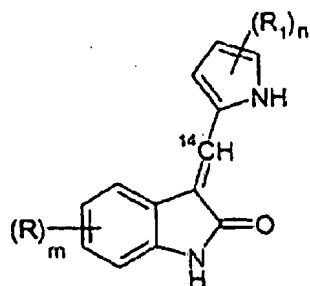
The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-5 and 7 rejected under 35 U.S.C. 103(a) as being unpatentable over Tang et al. (USPN 5,834,504) in view of Plieninger et al. (*Liebigs Ann. Chem.* 1972, 195-201).

The instant application is drawn to compounds of formula I:



with substitutions as defined as well as their use and a method of making by reacting an optionally substituted pyrrolinecarboxaldehyde with an oxindole in basic conditions, specifically pyrrolidine. Included is the species 3-[(3,5-dimethyl-1H-pyrrol-2-yl)[^{14}C]methylene-1,3-dihydro-2H-indol-2-one.

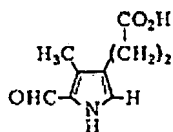
Determination of the scope and content of the prior art (MPEP §2141.01)

Tang et al. teach the compound 3-[(3,5-dimethyl-1H-pyrrol-2-yl)methylene-1,3-dihydro-2H-indol-2-one along with the method of making by reacting the oxindole with optionally substituted pyrrolinecarboxaldehyde in piperidine. See column 22, lines 42-49.

Ascertainment of the difference between the prior art and the claims (MPEP §2141.02)

Tang et al. do not teach that ^{14}C is present in the methylene group in more than the natural abundance, nor that the synthesis is done in pyrrolidine, or the use of the compound for absorption, distribution, metabolism, and excretion studies.

Finding of prima facie obviousness--rational and motivation (MPEP §2142-2413)



Plieninger et al. teach

in which the carbon of the aldehyde group is

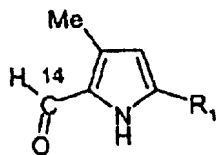
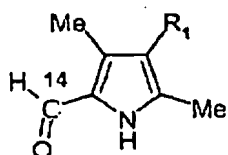
^{14}C . See page 196, compound 5 and page 198, second full paragraph. One of skill in the art would be able to make the switch from piperidine to pyrrolidine as the base for reaction as they are both cyclic nitrogenous bases. Additionally, one of skill in the art routinely uses radioisotopes for studies within the body for absorption, distribution, metabolism, and excretion studies.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the claimed invention was made to follow the synthetic scheme of Tang et al. with the ^{14}C replacement of Plieninger et al. using pyrrolidine instead of piperidine to make the claimed invention with a reasonable expectation of success. The motivation to do so is that radiolabeled compounds can be easily analyzed by mass spectroscopy in order to determine various aspects of the body, such as how much unnatural testosterone is within a human's system.

Thus, the claimed invention as a whole was *prima facie* obviousness over the combined teachings of the prior art.

Claim 6 rejected under 35 U.S.C. 103(a) as being unpatentable over Plieninger et al. (*Liebigs Ann. Chem.* 1972, 195-201).

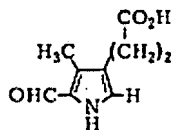
The instant application is drawn to compounds of the formulae



with substitutions as defined.

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Determination of the scope and content of the prior art (MPEP §2141.01)



Plieninger et al. teach

in which the carbon of the aldehyde group is

¹⁴C. See page 196, compound 5 and page 198, second full paragraph.

Ascertainment of the difference between the prior art and the claims (MPEP §2141.02)

Plieninger et al. do not teach a methyl group in the 5-position of the pyrrolidine.

Finding of prima facie obviousness--rational and motivation (MPEP §2142-2413)

It is known that compounds having similar structures have similar effects, especially when the difference is a hydrogen over a methyl group, which also provides the motivation and the reasonable expectation of success. See the decision of In re Wood, Whittaker, Stirling, and Ohta (199 USPQ 137).

Thus, the claimed invention as a whole was *prima facie* obviousness over the combined teachings of the prior art.

Conclusion

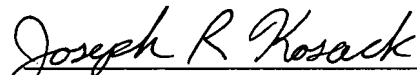
Claims 1-7 are rejected.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Kosack whose telephone number is (571)-272-5575. The examiner can normally be reached on M-F 6:30 A.M. until 4:00 P.M. The examiner has every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph McKane can be reached on (571)-272-0699. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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